

Three larvae were lent by F. L. Blanc. They are very typical of the genus *Liriomyza*. The only unusual character is the relatively large number of bulbs (8 or 9) on each posterior spiracle. The usual number is three. None of the bulbs is elongate and they are in an irregular row that slightly curves at both the dorsal and ventral ends towards the midline of the larva. The anterior spiracles each bear five to seven short bulbs.

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A NEW SPECIES OF EUMYSIA FROM SOUTHERN IDAHO¹

LEPIDOPTERA: PYRALIDAE

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During the course of studies on insects associated with range plants in southern Idaho a caterpillar was found severely defoliating *Atriplex confertifolia* (Torr.), a valuable desert forage plant, in several localized areas of the Raft River Valley, near Malta, Idaho. A few specimens were reared and the adults subsequently identified by J. F. Gates Clarke as an undescribed species of *Eumysia*. The purpose of this paper is to provide a name for this species so that it might be used elsewhere.

The author is indebted to Dr. W. F. Barr, University of Idaho; Dr. J. F. Gates Clarke, U. S. National Museum, and Dr. F. D. Rindge, American Museum of Natural History, for their assistance in the preparation of this paper. Dr. Clarke also made available to the author paratype specimens of most of the other members of the genus. Special thanks are also due Arthur D. Cushman, U. S. Department of Agriculture, whose excellent drawings appear in this paper.

Eumysia idahoensis, new species

Male.—Alar expanse 22 mm. Body and forewings slate-gray in appearance, uniformly flecked with white. *Head* with antenna white, broadly annulated with black; labial palpus gray. *Thorax* with legs gray, darkened at joints. *Fore wing* dark slate-gray above, abruptly lighter in color beyond subterminal line, ochreous scales scattered over surface, moderately concentrated in areas of submedial

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and subterminal lines; submedial line moderately distinct, bordered inwardly by mixed black and ochereous scales to wing base and from posterior margin of wing to radial vein; subterminal line distinct, extending from costal to posterior margins of wings, interrupted twice medially leaving a small white dot near center; termen with row of seven black dots; undersurface solid gray-brown, abruptly gray beyond subterminal line and along costa, termen spots distinct. *Hind wing* above and below fuscous; costal margin white above and blackish below; termen and posterior margin blackish. Abdomen predominately dark gray; posterior margin of each segment with white scaling; segments 4, 5, and 6 with hind angles moderately tufted.

Genitalia with gnathos stout; hook prominent, distinctly curved; anellus rectangular in form, rounded posteriorly.

Female.—Alar expanse 20 mm. Body and forewings gray, slightly lighter than male. *Fore wing* gray with markings similar to male, slightly heavier concentrations of ochereous scales about areas of subterminal and submedial lines; underside correspondingly lighter than that of male. *Hind wing* above and below slightly lighter than that of male and only faintly dark along termen and posterior margin. Abdomen same as male but lacking tufts on segments 4, 5, and 6. *Genitalia* typical with papilla analis flatly rounded posteriorly.

Types.—Holotype, male (USNM No. 63511), allotype, female and three male paratypes from Malta, Cassia County, Idaho, Dec. 28, 1951 (J. R. Douglass). Additional paratypes as follows: One male and one female from 15 miles south of Nampa, Canyon County, Idaho, May 1952 (W. F. Barr); one male and two females from Raft River Valley, Cassia County, Oct. 9, 1951 (L. J. Farmer); one male from 4 miles southeast of Idahome, Cassia County, Dec. 20, 1951 (G. Zappettini); one male from 4 miles east of Idahome, Cassia County, Feb. 27, 1956 (W. F. Barr); two females from 4 miles east of Idahome, Cassia County, Feb. 18 and 21, 1957 (R. A. Mackie). All type material was reared from *Atriplex confertifolia*. Paratypes are to be deposited in the collections of the U. S. National Museum, American Museum of Natural History, and University of Idaho.

Food plant.—*Atriplex confertifolia* is the preferred host and large collections of larvae have been taken from this plant. Three larvae also were collected from Saltsage, *Atriplex nuttallii* Wats., and 4-winged saltbush, *Atriplex canescens* (Pursh).

Distribution.—Collections of *E. idahoensis* have been made only from southern Idaho, but this insect has not been found throughout the entire distributional ranges of its hosts. Thus far, no adults have been taken in the field and the distribution of the species is based entirely on larval collections. *E. idahoensis* is particularly abundant in several localized areas of the Raft River Valley near Malta and Idahome, Cassia County, Idaho. It also has been collected 15 miles south of Bruneau and 5 miles north of Murphy, Owyhee County; 15 miles south of Nampa, Canyon County, and 15 miles west of Mountain Home, Elmore County.

A moderate amount of variation has been noted in the eight specimens examined. The ground color of the forewing varies from a light to a dark gray, and the subterminal and submedial lines may be obscured, especially in the extremely light or dark specimens. The subterminal line may be interrupted from one to several times, but one large break, antero-medially, is present in all specimens. The male genitalia of three dissected specimens were found to be quite uniform in structure and appearance.

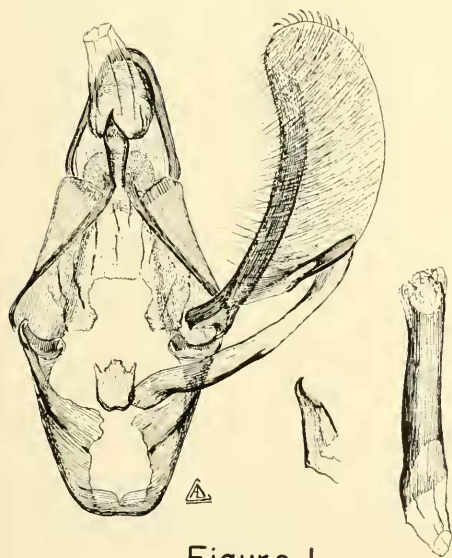


Figure 1

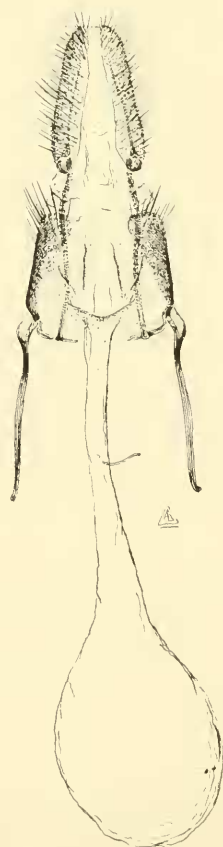


Figure 2

Fig. 1. Male genitalia of *Eumysia idahoensis*; fig. 2, female genitalia of *E. idahoensis*.

E. idahoensis most closely resembles *E. semicana* Heinrich, known only from Yakima, Washington, in general coloration and specifically in the color of the antenna, but may be separated by its much smaller size and by the presence of a distinctly lighter area beyond the subterminal line. *E. idahoensis* also differs from the remaining members of the genus *Eumysia* in color and size. It is the darkest species and averages smaller in wing expanse than any of the others. No other *Eumysia* has been recorded from Idaho. *E. mysiella* (Dyar) has been recorded from Arizona and New Mexico to as far north as Stockton, Utah; *midella* (Dyar) from New Mexico, Colorado, Arizona, California, and British Columbia, and *pallidipennella* (Hulst) from Colorado, New Mexico, California, and Washington.

The character which appears to be the most distinctive in separating *idahoensis* from other members of the genus lies in the structure of the male genitalia. Heinrich (1956) stated that "there are no structural differences in the genitalia that can be used to distinguish these supposed species." Only an illustration of the genitalia of *mysiella*, the genotype, was available to the author but an apparently significant difference between the two species is evident. The gnathos of *mysiella* as pictured is rather long and tapers terminally, whereas that of *idahoensis* (Fig. 1) is stout and tapers toward the base. The hook at the terminal end of the gnathos is distinctly curved in *idahoensis* but is straight in *mysiella*. The anellus also is different in the two species, that of *idahoensis* being rectangular in form and much longer than broad, whereas in *mysiella* it is as wide or wider than long and more or less crescent shaped. The male and female genitalia figured are of paratype specimens from the type locality and from the "Raft River Valley," respectively.

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